

FIGURE 1

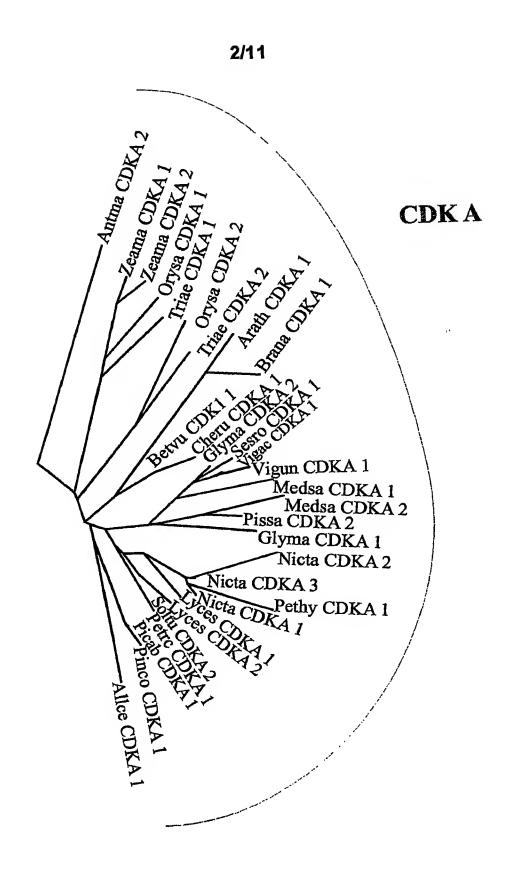


FIGURE 2

3/11

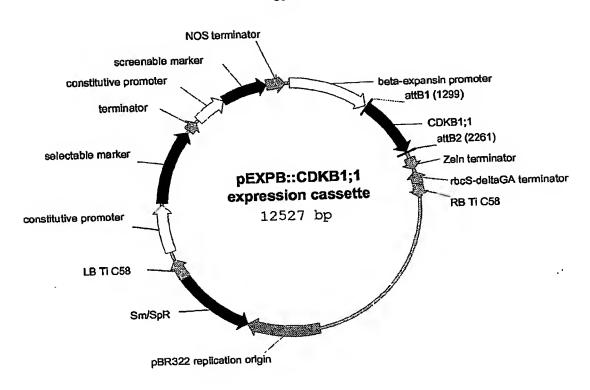


FIGURE 3

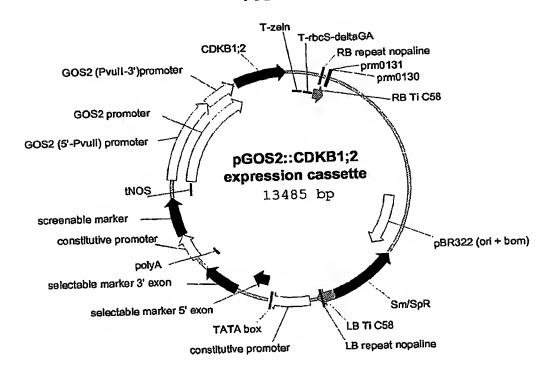


FIGURE 4

4/11

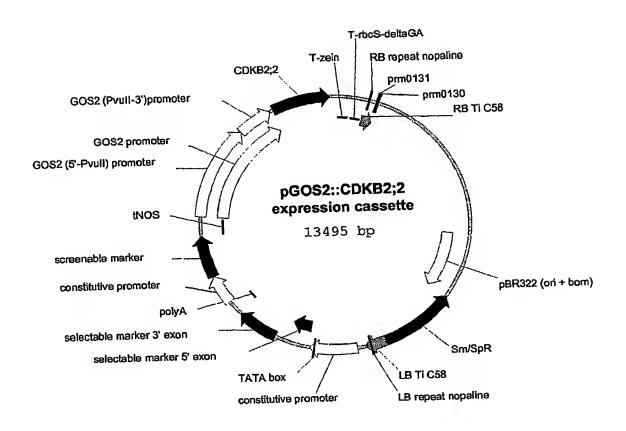


FIGURE 5

PCT/EP2004/052035 WO 2005/024029

5/11 SEQ ID NO 1: DNA sequence of CDK B 1;1

atggagaagtacgagaagctagagaaggtcggagaaggaacatacgggaaagtctacaaagc gatggagaaaggaactggtaagcttgttgctctgaagaaaactcgtctcgagatggacgaag aaggtattccaccaactgctcttcgtgagatctcgcttctccagatgttatcaacatcgatc tatgttgttcgattactctgcgtcgaacatgttcatcaaccatcaaccaaatctcaatctac caaatccaatctctatctcgtttttcgagtatctcgatactgatcttaagaaattcatcgatt cgtataggaaaggacctaatcctaagcctcttgagcctttttttgattcagaagttgatgttt cagctttgtaaaggtgttgcgcattgtcatagtcatggtgtgcttcaccgtgatcttaaacc gcagaatcttcttctggtgaaagataaagagcttcttaagattgctgatttgggtcttggtc gtgcttttactgttcctcttaagtcttatacgcatgagattgttactctttggtatagagct tatctttgctgagatggttcggaggcaagctcttttccctggtgattctgagtttcagcaat tgcttcatatcttcaggttgctaggaacaccaactgagcagcaatggccgggtgtttccaca ctgcgtgactggcatgtttaccctaagtgggagccgcaagacttaactcttgctgttccttc tctttcacctcaaggagttgatcttctcacgaaaatgctcaagtacaatccagccgaaagaa tttcagcaaaacagcacttgatcacccatattttgacagccttgacaagtctcagttctga

SEQ ID NO 2: Protein sequence of CDK B 1;1

MEKYEKLEKVGEGTYGKVYKAMEKGTGKLVALKKTRLEMDEEGIPPTALREISLLQMLSTSI YVVRLLCVEHVHQPSTKSQSTKSNLYLVFEYLDTDLKKFIDSYRKGPNPKPLEPFLIQKLMF QLCKGVAHCHSHGVLHRDLKPQNLLLVKDKELLKIADLGLGRAFTVPLKSYTHEIVTLWYRA PEVLLGSTHYSTGVDMWSVGCIFAEMVRRQALFPGDSEFQQLLHIFRLLGTPTEQQWPGVST LRDWHVYPKWEPQDLTLAVPSLSPQGVDLLTKMLKYNPAERISAKTALDHPYFDSLDKSQF

SEQ ID NO 3: DNA sequence of CDK B 1;2

atggagaaatacgagaagctcgaaaaggtcggtgaaggaacctatggaaaagtctacaaagc aatggagaaaaccaccggaaaactcgtcgctctgaagaaaactaggctcgaaatggacgaag tacatcgttcgtctcctctgcgtcgaacatgttattcaatcgaaagattcgactgtttctca ctctcccaaatccaatctctatctcgttttttgagtatctcgacactgatctcaagaaattta tagattctcatagaaagggctcgaatcctagaccgcttgaggcttctcttgtgcagaggttt atgtttcagctttttaaaggtgtggctcattgtcatagccatggtgtgcttcaccgtgatct taaaccgcagaatcttctattggataaggataaagggattcttaagattgctgatttgggtc ttagtcgtgcttttactgtgcctcttaaggcttatacacatgagattgttactctttggtat agagetectgaagttttgettggttetacteattactetactgetgttgatatttggtetgt tggatgcatctttgccgagatgattaggaggcaagctcttttccctggtgattctgagtttc agcaactacttcatattttcagattgttaggaacaccaactgagcagcaatggccgggtgta atggcattgcgtgactggcatgtctatccaaagtgggagccgcaagacttatcacgtgctgt tccatctctatctcctgaaggaattgatcttctcacgcaaatgttgaagtacaatccagcag aaagaatttcagcaaaagcagctctcgatcatccctactttgacagccttgacaaatctcag ttctga

FIGURE 6

6/11

SEQ ID NO 4: Protein sequence of CDK B 1;2

• MEKYEKLEKVGEGTYGKVYKAMEKTTGKLVALKKTRLEMDEEGIPPTALREISLLQMLSQSI YIVRLLCVEHVIQSKDSTVSHSPKSNLYLVFEYLDTDLKKFIDSHRKGSNPRPLEASLVQRF MFQLFKGVAHCHSHGVLHRDLKPQNLLLDKDKGILKIADLGLSRAFTVPLKAYTHEIVTLWY RAPEVLLGSTHYSTAVDIWSVGCIFAEMIRRQALFPGDSEFQQLLHIFRLLGTPTEQQWPGV MALRDWHVYPKWEPQDLSRAVPSLSPEGIDLLTQMLKYNPAERISAKAALDHPYFDSLDKSQ F

SEQ ID NO 5: DNA sequence of CDK B 2;2

atggacaacaatggagttaaacccgctgtttccgccatggaagcctttgaaaagcttgagaa agtaggtgaagggacttatgggaaagtttacagagcaagagagaaagctactgggatgatcg ttgctttgaagaagacgcgtctccatgaggatgaagaaggtgttcctcccactactcttcgc gcaaggaataaacaaagaaggaaaaactgtactttaccttgttttcgagtatgttgatactg atctcaagaaattcatcagaagctttcgtcaagctggacagaacattccacaaaatactgtc aagtgcttgatgtaccagttatgcaaaggcatggctttttgccatggtcatggagtgttgca cagggatcttaagcctcacaatctcttgatggaccggaagacaatgacgctcaaaatagcag atcttggattagccagagccttcactctcccaatgaaaaagtatacacatgagattctaact ctatggtatagagctccggaagttcttcttggagcaacccattactctactggagtggatat ctgagctccaacagctcctccgtatattcaggttgttgggaacaccaaacgaagaagtttgg cctggagtaagcaaactcaaggactggcatgaatacccgcaatggaaaccgttgagtctctc cacagetgtgccaaacetcgacgaggctggacttgatctcttatctaaaatgctggagtacg agccagcaaaacgaatctcagcaaagaaagctatggagcatccttacttcgatgatttgcct gacaagtcctctctctga

SEQ ID NO 6: Protein sequence of CDK B 2;2

MDNNGVKPAVSAMEAFEKLEKVGEGTYGKVYRAREKATGMIVALKKTRLHEDEEGVPPTTLR EISILRMLARDPHIVRLMDVKQGINKEGKTVLYLVFEYVDTDLKKFIRSFRQAGQNIPQNTV KCLMYQLCKGMAFCHGHGVLHRDLKPHNLLMDRKTMTLKIADLGLARAFTLPMKKYTHEILT LWYRAPEVLLGATHYSTGVDMWSVGCIFAELVTKQAIFAGDSELQQLLRIFRLLGTPNEEVW PGVSKLKDWHEYPQWKPLSLSTAVPNLDEAGLDLLSKMLEYEPAKRISAKKAMEHPYFDDLP DKSSL

7/11 SEQ ID NO 7: DNA sequence of CDK A;1 (Oryza sativa)

acctctcctccgattaatcccctccctcttcttcctccacttctgcgcctgctcttcctc ccctcgccgaccctacctactcgcgccgccgccgtcgcattgggcggcaaacggagggggg ttaaccctgatggagcagtacgagaaggaggagagattggggagggcacgtacggggtggt gtacagggcgcgggacaaggtcaccaacgagacgatcgcgctcaagaagatccggcttgagc aggaggatgagggcgtcccctccaccgcaatccgcgagatctcgctcctcaaggagatgcat cacggcaacatcgtcaggttacacgatgttatccacagtgagaagcgcatatatcttgtctt tgagtatctggatctggacctaaagaagttcatggactcttgtccagagtttgcgaaaaacc ccactttaattaagtcatatctctatcagatactccgcggcgttgcttactgtcattctcat agagttcttcatcgagatttgaaacctcagaatttattgatagatcggcgtactaatgcact gaagcttgcagactttggtttagccagggcatttggaattcctgtccgcacgtttactcacg aggttgtaaccttgtggtatagagctccagagatccttcttggatcaaggcagtattctaca ccagttgatatgtggtcagttggttgtatctttgcagaaatggtgaaccagaaaccactgtt ccctggtgattctgagattgatgaattatttaagatattcagggtactaggaactccaaatg aacaaagttggccaggagttagctcattacctgactacaagtctgctttccccaagtggcaa gcacaggatcttgcaactattgtccctactcttgaccctgctggtttggaccttctctctaa aatgcttcggtacgagccaaacaaaggatcacagctagacaggctcttgagcatgaatact tcaaggaccttgagatggtacaatgaccctgctatggctttacattggattggcatatgtat gggctgggctcctcatttcattccttctgtgaacgctgtgcccttcgtttgggcatttttg

SEQ ID NO 8: Protein sequence of CDK A;1 (Oryza sativa)

MEQYEKEEKIGEGTYGVVYRARDKVTNETIALKKIRLEQEDEGVPSTAIREISLLKEMHHGN IVRLHDVIHSEKRIYLVFEYLDLDLKKFMDSCPEFAKNPTLIKSYLYQILRGVAYCHSHRVL HRDLKPQNLLIDRRTNALKLADFGLARAFGIPVRTFTHEVVTLWYRAPEILLGSRQYSTPVD MWSVGCIFAEMVNQKPLFPGDSEIDELFKIFRVLGTPNEQSWPGVSSLPDYKSAFPKWQAQD LATIVPTLDPAGLDLLSKMLRYEPNKRITARQALEHEYFKDLEMVQ

SEQ ID NO 9: Protein sequence of Mutant 1 of CDK A;1

MEQHEKEEKIGEGTYGVVYRARDKVTNETIALKKIRLEQEDEGVPSTAIREISLLKEMHHGN IVRLHDVIHSEKRIYLDFEYLDLDLKKFMDSCPEFAKNPTLIKSYLYQILRGVAYCHSHRVL HRDLKPQNLLIDRRTNALKLADFGLARTFGIPVRTFTHEVVTLWYRAPEILLGSRQYSTPVD MWSVGCIFAEMVNQKPLFPGDSEIDELFKIFRVLGTPNEQSWPGVSSLPDYKSAFPKWQAQD LATIVPTLDPAGLDLLSKMLRYEPNKRITARQALEHEYFKDLEMVQ

SEQ ID NO 10: Protein sequence of Mutant 2 of CDK A;1

MEQYEKEEKIGEGTYGVVYRARDKVTNETTALKKIRLEQEDEGVPSTAIREISLLKEMHHGN IVRLHDVIHSEKRIYLVFEYLDLDLKKFMDSCPEFAKNPTLIKSYLYQILRGVAYCHSHRVL HRDLKPQNLLIDRRTNALKLADFGLARAFGIPVRTFTHEVVTLWYRAPEILLGSRQYSTPVD MWSVGCIFAEMVNQKPLFPGDSEIDELFKIFRVLGTPNEQSWPGVSSLPDYKSAFPKWQAQD LATIVPTLDPAGLDLLSKMLRYEPNKRITARQALEHEYFKDLEMVQ

8/11

SEQ ID NO 11: Protein sequence of Mutant 3 of CDK A;1

MEQYVKEEKIGEGTYGVVYRARDKVTNETIALKKIRLEQEDEGVPSTAIREISLLKEMHHGN IVRLHDVIHSEKRIYLVFEYLDLDLKKFMDSCPEFAKNPTLIKSYLYQILRGVAYCHSHSVL HRDLKPQNLLIDRRTNALELADFGLARAFGIPVRTFTHEVVTLWYRAPEILLGSRQYSTPVD MWSVGCIFAEMVNQKPLFPGDSEIDELFKIFRVLGTPNEQSWPGVSSLPDYKSAFPKWQAQD LATIVPTLDPAGLDLLSKMLRYEPNKRITARQALEHEYFKDLEMVQ

SEQ ID NO 12: Protein sequence of Mutant 4 of CDK A;1

MEQYEKEEKIGEGTYGVVYRARDKVTNETIALKKIRLEQEDEGVPSTAIREISLLKEMHHGN IVRLHDVIHSEKRIYLVFEYLDLDLKKFMDSCPEFAKNPTLIKSYLYQILRGVAYCHSHRVL HRDLKPQNLLIDRRTNALKLADFGLARAFRIPVRTFTHEVVTLWYRAPEILLGSRQYSTPVD MWSVGCIFAEMVNQKPLFPGDSEIDELFKIFRVLGTPNEQSWPGVSSLPDYKSAFPKWQAQD LATIVPTLDPAGLDLLSKMLRYEPNKRITARQALEHEYFKDLEMVQ

SEQ ID NO 13: Protein sequence of Mutant 5 of CDK A;1

MEPYEKEEKIGEGTYGVVYRARDKVTNETIALKKIRLAQEDEGVPSTAIREISLLKEMHHGN IVRLHDVIHSEKRIYLVFEYLDLDLKKFMDSCPEFAKNPTLIKSYLYQILRGVAYCHSHRVL HRDLKPQNLLIDLRTNALKLADFGLARAFGIPVRTFTHEVVTLWYRAPEILLGSRQYATPVD MWSVGCTFAEMVNQKPLFPGDSEIDELFKIFRVLGTPNEQSWPGVSSLPDYKSAFPKWQAQD LATIVPTLDPAGLDLLSKVLRYEPNKRITAQQALEHEYFKDLEMVQ

SEQ ID NO 14: DNA sequence of beta-expansin promoter EXPB8

aaaaccaccgagggacctgatctgcaccggttttgatagttgagggacccgttgtgtctggt tttccgatcgagggacgaaaatcggattcggtgtaaagttaagggacctcagatgaacttat tccggagcatgattgggaagggaggacataaggcccatgtcgcatgttttggacggtccag atctccagatcactcagcaggatcggccgcgttcgcgtagcacccgcggtttgattcggctt cccgcaaggcggccggtggccgtgccgccgtagcttccgccggaagcgagcacgccgcc tactctctccgtttcacaatgtaaatcattctactattttccacattcatattgatgttaat gaatatagacatatatatctatttagattcattaacatcaatatgaatgtaggaaatgctag tgaaagaattaatgcaagatcgtatctgccgcatgcaaaatcttactaattgcgctgcatat atgcatgacagcctgcatgcgggcgtgtaagcgtgttcatccattaggaagtaaccttgtca ttacttataccagtactacatactatatagtattgatttcatgagcaaatctacaaaactgg aaagcaataagaaatacgggactggaaaagactcaacattaatcaccaaatatttcgccttc tccagcagaatatatatctctccatcttgatcactgtacacactgacagtgtacgcataaac gcagcagccagcttaactgtcgtctcaccgtcgcacactggccttccatctcaggctagctt teteagecaccategtacatgteaacteggegegegeacaggeacaaattaegtacaaaac acgaacgcacgcacgccaaccccacgacacgatcgcgcgacgccggcgacaccgg ccgtccacccgcgccctcacctcgccgactataaatacgtaggcatctgcttgatcttgtca aca

9/11

SEQ ID NO 15: DNA sequence of GOS2 promoter

atataaaatgagaccttatatatgtagcgctgataactagaactatgcaagaaaaactcatc cacctactttagtggcaatcgggctaaataaaaaagagtcgctacactagtttcgttttcct tagtaattaagtgggaaaatgaaatcattattgcttagaatatacgttcacatctctgtcat gaagttaaattattcgaggtagccataattgtcatcaaactcttcttgaataaaaaatctt tctagctgaactcaatgggtaaagagagatttttttttaaaaaaatagaatgaagatattc tgaacgtattggcaaagatttaaacatataattatataattttatagtttgtgcattcgtca attgacttatttttattatttttttttcgattagatgcaaggtacttacgcacacatt tgtgctcatgtgcatgtgtgagtgcacctcctcaatacacgttcaactagcaacacatctct aatatcactcgcctatttaatacatttaggtagcaatatctgaattcaagcactccaccatc accagaccacttttaataatatctaaaatacaaaaaataattttacagaatagcatgaaaag gcgccaatctcccatattgggcacacaggcaacaacagagtggctgcccacagaacaaccca caaaaaacgatgatctaacggaggacagcaagtccgcaacaaccttttaacagcaggctttg cggccaggagagaggagggcaaagaaaccaagcatcctcctcctccatctataaat aggacacgcgactagcagaagccgagcgaccgccttcttcgatccatatcttccggtcgagt tcttggtcgatctcttccctcctcctcctcctcacagggtatgtgcccttcggttgttc ttggatttattgttctaggttgtgtagtacgggcgttgatgttaggaaaggggatctgtatc tgtgatgattcctgttcttggatttgggatagaggggttcttgatgttgcatgttatcggtt cggtttgattagtagtatggttttcaatcgtctggagagctctatggaaatgaaatggttta gggtacggaatcttgcgattttgtgataccttttgtttgaggtaaaatcagagcaccggtga ttttgcttggtgtaataaaagtacggttgtttggtcctcgattctggtagtgatgcttctcg atttgacgaagctatcctttgtttattccctattgaacaaaaataatccaactttgaagacg gtcccgttgatgagattgaatgattcttaagcctgtccaaaatttcgcagctggcttg tttagatacagtagtccccatcacgaaattcatggaaacagttataatcctcaggaacaggg tcactttctggttcagttcaatgaattgattgctacaaataatgcttttatagcgttatcct agctgtagttcagttaataggtaatacccctatagtttagtcaggagaagaacttatccgat ttctgatctccatttttaattatatgaaatgaactgtagcataagcagtattcatttggatt atttttttttttagctctcaccccttcattattctgagctgaaagtctggcatgaactgtcct caattttgttttcaaattcacatcgattatctatgcattatcctcttgtatctacctgtaga gggatagttatactgcttgttcttatgattcatttcctttgtgcagttcttggtgtagcttg ccactttcaccagcaaagttc

SEQ ID NO 16: DNA sequence of sense primer prm0350

ggggacaagtttgtacaaaaagcaggcttcacaatggagaagtacgagaagctaga

10/11

SEQ ID NO 17: DNA sequence of antisense primer prm0351 ggggaccactttgtacaagaaagctgggttcagaactgagacttgtcaagg

SEQ ID NO 18: DNA sequence of sense primer prm439
ggggacaagtttgtacaaaaaagcaggcttcacaatggagaaatacgagaagctc

SEQ ID NO 19: DNA sequence of antisense primer prm440 ggggaccactttgtacaagaaagctgggtggtcagaactgagatttgtc

SEQ ID NO 20: DNA sequence of sense primer prm2213

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SEQ ID NO 21: DNA sequence of antisense primer prm2214

ggggaccactttgtacaagaaagctgggttcagagagaggacttgtcag

11/11

DKB2.1 DKB2.2 DKB1.1 DKB1.2	MDEGVIAVSAMDAFEKLEKVGEGTYGKVYRAREKATGKIVALKKTRLHEDEEGVPSTT 58 MDNNGVKPAVSAMEAFEKLEKVGEGTYGKVYRAREKATGMIVALKKTRLHEDEEGVPPTT 60 MDNNGVKPAVSAMEAFEKLEKVGEGTYGKVYKAMEKGTGKLVALKKTRLEMDEEGIPPTA 48
CDKB2.1 CDKB2.2 CDKB1.1 CDKB1.2	LREISILRMLARDPHVVRLMDVKQGLSKEGKTVLYLVFEYMDTDVKKFIRSFR 111 LREISILRMLARDPHIVRLMDVKQGINKEGKTVLYLVFEYVDTDLKKFIRSFR 113 LREISLLQMLSTSIYVVRLLCVEHVHQPSTKSQSTKSNLYLVFEYLDTDLKKFIDSYR 106 LREISLLQMLSQSIYIVRLLCVEHVIQSKDSTVSHSPKSNLYLVFEYLDTDLKKFIDSHR 108 LREISLLQMLSQSIYIVRLLCVEHVIQSKDSTVSHSPKSNLYLVFEYLDTDLKKFIDSHR 108 ****:*:*:*:::::::::::::::::::::::::::
CDKB2.1 CDKB2.2 CDKB1.1 CDKB1.2	STGKNIPTQTIKSLMYQLCKGMAFCHGHGILHRDLKPHNLLMDPKTMRLKIADLGLAR 169 QAGQNIPQNTVKCLMYQLCKGMAFCHGHGVLHRDLKPHNLLMDRKTMTLKIADLGLAR 171 KGPNPKPLEPFLIQKLMFQLCKGVAHCHSHGVLHRDLKPQNLLLVKDKELLKIADLGLGR 166 KGSNPRPLEASLVQRFMFQLFKGVAHCHSHGVLHRDLKPQNLLLDKDKGILKIADLGLSR 168 .: *:::::*:** **::**:****:***:***:***:**
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CDKB2.1 CDKB2.2 CDKB1.1 CDKB1.2	QLLHIFKLFGTPNEEMWPGVSTLKNWHEYPQWKPSTLSSAVPNLDEAGVDLLSKMLQYEP 289 QLLRIFRLLGTPNEEVWPGVSKLKDWHEYPQWKPLSLSTAVPNLDEAGLDLLSKMLEYEP 291 QLLHIFRLLGTPTEQQWPGVSTLRDWHVYPKWEPQDLTLAVPSLSPQGVDLLTKMLKYNP 286 QLLHIFRYLLLVFDANVY-VYRNQFRTLAH
CDKB2.1 CDKB2.2 CDKB1.1 CDKB1.2	AKRISAKMAMEHPYFDDLPEKSSL 313 AKRISAKKAMEHPYFDDLPDKSSL 315 AERISAKTALDHPYFDSLDKSQF- 309